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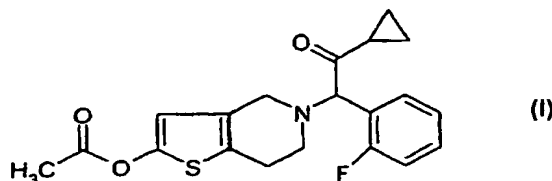
**Declarations under Rule 4.17:**

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,

[Continued on next page]

(54) Title: TREATING CARDIOVASCULAR DISEASES WITH A COMPOUND OF FORMULA (I) (CS 747 - PRASUGREL; RN 150322-43-4)



(57) Abstract: A method of treating Cardiovascular Diseases comprising administering of a compound of formula (I) (chemical names i.a. CS747 or Prasugrel; registry number 150322-43-3) or a pharmaceutically acceptable salt, solvate, prodrug, active metabolite, racemate or enantiomer thereof, in conjunction with coronary and non-coronary intervention procedures is disclosed.



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International Application No

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61P9/00 A61K31/4365 A61K31/60

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, CHEM ABS Data, BIOSIS, EMBASE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/44239 A (BRISTOL MYERS SQUIBB CO ; MURUGESAN NATESAN (US); GU ZHENGXIANG (US);) 21 June 2001 (2001-06-21) page 1, lines 7-9 page 48, lines 9,24,25 sentence bridging page 48 and page 49 page 53, lines 25,26 page 54, lines 4,5	1-14
X	WO 02/04461 A (YAMAMURA NAOTOSHI ; SANKYO CO (JP); ASAI FUMITOSHI (JP); INOUE TERUHIK) 17 January 2002 (2002-01-17) abstract page 3	1-14

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
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- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

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# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US2004/011257

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/051412 A (SANKYO CO ; ASAI FUMITOSHI (JP); INOUE TERUHIKO (JP); OGAWA TAKETOSHI) 4 July 2002 (2002-07-04) abstract page 3	1-14
X	WO 97/49397 A (SANKYO CO ; ASAI FUMITOSHI (JP); INOUE TERUHIKO (JP); OGAWA TAKETOSHI) 31 December 1997 (1997-12-31) abstract	1-14
X	EP 1 298 132 A (SANKYO CO ; UBE INDUSTRIES (JP)) 2 April 2003 (2003-04-02) page 2 '0001!', '0007!', '0008!	1-14

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/011257

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0144239	A	21-06-2001	AU 2092601 A CA 2395088 A1 EP 1237888 A2 JP 2003520785 T WO 0144239 A2 US 2004127515 A1 US 2004106833 A1 US 2002143024 A1	25-06-2001 21-06-2001 11-09-2002 08-07-2003 21-06-2001 01-07-2004 03-06-2004 03-10-2002
WO 0204461	A	17-01-2002	AU 6791601 A BR 0112168 A CA 2415558 A1 CN 1452624 T CZ 20030018 A3 EP 1298132 A1 HU 0301645 A2 WO 0204461 A1 JP 2002145883 A NO 20030022 A US 2003134872 A1	21-01-2002 02-09-2003 17-01-2002 29-10-2003 14-05-2003 02-04-2003 29-09-2003 17-01-2002 22-05-2002 05-03-2003 17-07-2003
WO 02051412	A	04-07-2002	BR 0116531 A CA 2432644 A1 CZ 20031660 A3 EP 1350511 A1 HU 0400644 A2 WO 02051412 A1 JP 2002255814 A NO 20032902 A SK 7542003 A3 US 2004024013 A1	25-02-2004 04-07-2002 17-12-2003 08-10-2003 28-06-2004 04-07-2002 11-09-2002 24-06-2003 02-12-2003 05-02-2004
WO 9749397	A	31-12-1997	AU 3191597 A WO 9749397 A1 JP 10310586 A	14-01-1998 31-12-1997 24-11-1998
EP 1298132	A	02-04-2003	AU 6791601 A BR 0112168 A CA 2415558 A1 EP 1298132 A1 HU 0301645 A2 NO 20030022 A US 2003134872 A1 CN 1452624 T CZ 20030018 A3 WO 0204461 A1 JP 2002145883 A	21-01-2002 02-09-2003 17-01-2002 02-04-2003 29-09-2003 05-03-2003 17-07-2003 29-10-2003 14-05-2003 17-01-2002 22-05-2002

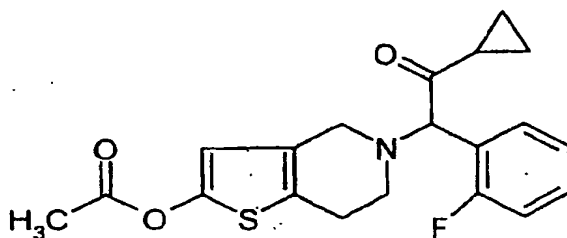
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International application No.

PCT/US2004/011257

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

A method of treating Cardiovascular Diseases comprising administering of a compound of formula I (chemical names i.a. CS747 or Prasugrel; registry number 150322-43-3)



I

or a pharmaceutically acceptable salt, solvate, prodrug, active metabolite, racemate or enantiomer thereof, in conjunction with coronary and non-coronary intervention procedures is disclosed.